Original Article

Reasons Military Patients With Primary Care Access Leave an Emergency Department Waiting Room Before Seeing a Provider

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Objectives: Our objective was to assess patients' understanding of emergency department (ED) wait times and why patients may leave the waiting room before seeing a provider.

Methods: Survey of patients in the ED waiting room of an urban tertiary care military hospital where civilian and military patients are treated.

Results: A total of 508/517 surveys (98%) were completed. Age ranges were 18 to 35 years (49%), 36 to 60 (31%), or older than 60 (20%). Education levels were high school (20%), some college (37%), or college graduate (39%). Of 503 respondents, 125 (25%) had left an ED waiting room before seeing a provider. The reasons included excessive wait times (91%) and family responsibilities (5%). Five hundred eight reported the factors that would motivate them to wait to see the physician (not leave without being seen [LWOBS]) were the severity of illness (64%), and if they received an update of wait times (26%); 82% (391/480) understood that severely ill patients were seen first. Patients attributed long wait times to doctors and nurses caring for other patients (292/583, 50%) and insufficient physician and nurse staffing (245, 42%). Of 802 responses for ideas to improve the wait, 34% said regular updates on estimated wait times, 21% said television shows or movies to view, 20% said books and magazines to read, and 11% said computers to access.

Conclusions: Long wait times were the primary reason that patients left before seeing a provider, despite having ready access to care. Respondents attributed long wait times to patient volume and inadequate staffing. Regular updates on wait times and material for entertainment may improve the waiting experience and reduce LWOBS.

Key Words: emergency department, leave without being seen, primary care access, wait times

Emergency department (ED) waiting rooms can be anxiety provoking, uncomfortable, and frustrating to patients, and patients may leave before seeing a provider and receiving treatment. Patients who register in the ED but then leave without being seen (LWOBS) by a provider have been studied. These patients may be at an increased risk for poor outcomes related to their presenting illness or complaint.[1,2]

LWOBS rates have been reported to be between 1.5% and 3%, but they can be as high as 15%.[3] Military beneficiaries are fully insured and have access to emergency care in military treatment facilities without copays or required authorization by an insurance company or health maintenance organization. This immediate emergency care access may encourage them to use the ED as a convenient place to seek care, however, and may inadvertently lead to the overuse of the ED and longer wait times.[4] Longer wait times may increase rates of LWOBS and may reduce the attention and care provided to seriously ill or injured patients.[5]

Key Points

- Long wait times were the primary reason that patients left without being seen by a provider, despite being in a military healthcare system with ready access to care.
- Respondents attributed long wait times to patient volume and inadequate emergency department staffing.
- Participants said regular updates on wait times and time occupying activities (eg, movies, magazines, computer access) may improve the waiting experience.

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In the rapid entry and accelerated care at triage process, researchers reduced LWOBS rates by eliminating admissions work, reducing time putting a patient in a bed, and providing initial emergency care in triage.[3] In addition, patient perception of their waiting room experience may have more of an impact on patient satisfaction than actual wait times. Patients who were provided soothing music or comfort measures, such as ice packs or bandages for cuts, reported greater satisfaction and willingness to wait longer to see a provider.[6–8] Additional studies analyzed systems to improve wait times and efficiency, which led to increased patient satisfaction and decreased LWOBS rates.[3,5,9,10] Follow-up telephone calls in the days following the ED visit were performed.

To our knowledge, no survey has directly assessed patients' motivations for LWOBS, their understanding of triage as it affects wait times, and suggestions for improving the quality of waiting in a military emergency department. Our study examines patients' perceptions "in the moment," while waiting to see a provider. Our primary objective was to collect and report the patients' understanding of ED wait times and to study why patients may leave the waiting room before seeing a provider. Our secondary objective was to assess their understanding of triage as it affects wait times and to evaluate strategies to make the wait more comfortable.

Methods

We conducted a voluntary nine-question, multiple-choice survey on a convenience sample of English-speaking patients 18 years or older waiting to be seen in the ED of an urban tertiary care military teaching hospital where civilian patients also are treated. The hospital is a level 1 trauma center and cardiac referral center with an annual volume of approximately 53,000 patients, of whom 20% are not service members. Participants comprised active duty (excluding basic trainees) and retired military members, family members, and civilians presenting to the ED.

Survey questions were piloted on a small sample and then revised. Trained research assistants were given a script for inviting participants to respond to the survey and were available to assist patients who experienced difficulty answering questions. They distributed and collected the paper surveys while the patients were in the waiting room and noncritical care areas of the ED from February 1–August 31, 2010. The paper survey was self-administered and required <10 minutes to complete. Collected information was extracted from the written surveys and compiled in a locked electronic database (Microsoft Excel 2007, Microsoft Corp, Redmond, WA).

The survey queried patients on their willingness to wait to be seen, if they had ever left the ED before being seen by a provider in previous ED visits, if they had returned in the next 48 hours seeking care for the same problem, their knowledge of triage as it affects wait times, and situations they perceive would make the wait time more pleasant. Some questions were multiresponse items. LWOBS was defined as a person who registered as a patient in the ED and did not respond after three calls from the triage nurse to see a provider.

Data were analyzed with descriptive statistics including proportions using statistical software in an Excel spreadsheet. If an incomplete survey was returned, then the completed questions were included in our analysis. The institutional review board of the 59th Medical Wing (Wilford Hall Medical Center) approved this exempt study. No protected health information was collected.

Results

Participants completed 508 of 517 surveys, resulting in a 98% response rate. Not all of the participants responded to every question, and some questions elicited more than one possible response. Age ranges were 18 to 35 (49%), 36 to 60 (31%), or older than 60 (20%) years. Of 508 participants responding, the highest education level obtained included some high school in 17 (3%), a high school diploma or equivalent in 103 (20%), some college in 190 (38%), and a college degree (associate's, bachelor's, master's, or doctorate) in 198 (39%).

Of 503 respondents, 125 (25%) had left an ED waiting room at least once before seeing a provider on a prior visit. Reasons for leaving included excessive wait times (91%), family responsibilities (5%), a belief that their condition was a benign illness (2%), and ability to schedule a doctor's appointment with or without the help of ED personnel (2%). Fifty of these 125 patients (40%) had returned in the next 48 hours following their LWOBS visit to receive care for the same condition because their condition had worsened.

Of 508 responses on factors that would motivate the patient to wait to see the provider (not LWOBS), 325 (64%) reported illness severity, 133 (26%) reported receiving an update of estimated wait times, 27 (5%) stated activities to fill the wait time, and 23 (5%) said having no other conflicting commitments that day. Based on their condition on the day of the survey, 497 patients were willing to wait 1 to 2 hours (166, 33%), 3 to 4 hours (156, 31%), 5 to 6 hours (59, 12 %), or >6 hours (116, 23%). Of 583 responses to reasons for long wait times, 292 (50%) stated that doctors and nurses were busy caring for patients, 245 (42%) said there was insufficient physician and nurse staffing, 21 (4%) believed that doctors and nurses were disorganized and could not keep up with workloads, 15 (2%) attributed the long wait times to inconsideration of staff for making people wait, and 10 (2%) believed that doctors and nurses take too many breaks.

Ninety-four percent of participants (480/508) responded to the question about their understanding of triage. Of these 480 respondents, 391 (82%) reported that triage meant that the most critical patients are evaluated and treated first, 72 (15%) said they did not know the definition of triage, 15 (3%) stated that triage was first-come, first-served, and 2 (0.5%) thought it was a type of bandage. Of 479 participants, 394 (82%) said they would be willing to complete medical paperwork while

waiting. Eighty-six percent (406/471) of patients were willing to receive a follow-up telephone call to inquire about their medical condition the day after LWOBS.

Of 802 responses for ideas to improve the ED waiting experience, 272 (34%) said regular updates on estimated wait times, 166 (21%) wanted television shows or movies, 159 (20%) reported books and magazines, 86 (11%) wanted computers, 68 (8%) said they would like a separate children's area, and 51 (6%) would like toys for children to play with.

Discussion

We found that patients primarily identified a long wait as the reason for leaving the emergency department before seeing a provider. Although the mean LWOBS rate at our institution was 1.8% during the study period, 25% of patients surveyed had at least one previous LWOBS experience in their lifetime, which they attributed to long wait times.

Long wait times are common in EDs and can be caused by multiple factors, including limited hospital inpatient capacity, increased number of patients, lack of ED bed space, overuse of the ED, decreased primary care access, and higher acuity among the patients who do present for care.

Our surveyed population was educated, mostly insured, and had complete primary care access, which may have contributed to their decision to leave the ED before completing the visit. Patients may not want to wait or believe they cannot wait until their primary care appointment and thus seek care in the ED, resulting in the unintended consequence of ED overuse.

In some regions of the United States, particular treatment facilities are designated as "safety net" hospitals for the medically underserved, uninsured, and underinsured. The Centers for Disease Control and Prevention defines safety net hospitals as those healthcare facilities where at least 30% of the patients are Medicaid eligible, 30% are uninsured, or 40% of the patients fall into either category.[11] The ED plays a critical role in this safety net. In the military medical system, health insurance is not a barrier to care, but rather, paradoxically, it may indirectly contribute to long ED wait times because of unlimited access.

In our sample, the majority understood the definition of triage to mean that the most severely ill patients were evaluated and treated first. Patients in the waiting area see other patients arriving at registration and may realize when someone arrives who is more critically ill than themselves, thus potentially delaying their own care. They may, however, be unaware of other factors contributing to the long wait times, including incoming ambulances or patients referred from internal clinics. A small number said triage meant "first-come, first-served," which may reflect a "clinic appointment" mentality.

Despite the perceived long wait times, one-third of respondents were willing to wait up to 4 hours to be seen, and one-quarter said 6 hours. The main reason patients stated they would stay until being seen was the severity of their illness, meaning that they were ill enough to require medical attention during that visit. Fernandes et al reported that most dissatisfied LWOBS patients leave within 2 hours of ED registration, which would have included approximately two-thirds of our patients.[12]

To improve the waiting experience, most respondents wanted regular updates on estimated wait times.[13] Updates may occur in various ways, including verbal announcements, LED displays with a running message, plasma screens, online posted wait times, and others. Some hospitals have posted real-time estimates of ED wait times online for the past few years.[14] In addition, with smart phone technology, telephone applications show real-time ED wait times. In 2010, one Ohio hospital began providing live streaming of wait times on highway billboards, but chose not to include their level 1 trauma center and stroke/cardiac referral center because of ambulance traffic.[15] Our hospital experienced the same problem.

Wait times are defined and calculated differently. In some facilities, wait time represents the time from patient arrival until the patient is seen by the triage nurse.[16] In others it may represent the time from patient arrival until the patient is placed in the treatment room,[17] or from registration to discharge.[13] Wait time calculations vary from a 1-hour rolling average updated every 15 minutes,[17] to the mean wait time for patients seen in the last 4 hours,[18] or to the median wait time for patients seen in the last hour, or it can be based on the longest wait of a patient in the waiting room.[14,19]

Some institutions post ED wait times for multiple hospitals in the area to give patients the choice of where to be seen; however, these hospitals and urgent care centers generally belong to the same healthcare system. It is unlikely, therefore, to find wait times for all of the emergency centers in one city posted in one place.

Despite access to regularly updated ED wait times, it is not clear if this knowledge has enhanced patient care, satisfaction, or outcome. The intent of publishing wait times was to enable patients to make an informed decision about where to seek care based on which facility had the shortest wait times. It would seem intuitive that shorter wait times may translate into shorter length of stays and improved patient satisfaction. Xie et al evaluated the effect of publishing ED wait times (defined as registration to discharge) for two Canadian hospitals.[13] They found that the rates of wait times exceeding 4 hours decreased at both sites, whereas the mean wait time increased slightly, by approximately 10 minutes. They also found that patients were more likely to visit the facility with the shorter wait time, but there were no reports of patient satisfaction or outcome. Patients' perception of quality of care received is attributed to their satisfaction with wait times.[20] In addition, it is known that prolonged ED wait time and length of stay reduce quality of care and increase adverse events.[21] Thompson et al and Boudreaux et al found that patient perceptions of wait times, along with information delivery and interactions with ED staff, predicted patient satisfaction, whereas actual wait times did not.[22,23]

In a control-matched study of ED LWOBS patients, Monzon et al found that long wait times were the primary reason for uncompleted visits.[24] When asked what they would change about their waiting experience, approximately half of the patients said shorter wait times and one-fourth said knowing estimated wait times. These numbers are consistent with our findings.

Giving patients the option to select which ED to visit based on wait times has potential for harm if other factors are not considered, such as severity of illness and distance to care. Patients may inadvertently bypass a cardiac care or stroke center and go to another facility because of shorter ED wait times. In addition, misplaced emphasis on door-to-doctor times may obscure more meaningful measures such as time to admission.[25] Furthermore, patients may seek care in the ED because wait times may appear shorter than waiting for primary care appointments, thus leading to overuse of the ED, and subsequently longer wait times. Allowing patients to choose which facility to visit based on wait times, however, may improve patient autonomy in that it involves patients in the decision-making process. Thus, they may be more likely to remain in that hospital and not LWOBS because they chose the facility.

In addition to shorter wait times and regular updates on wait times, respondents in our study said that entertainment materials such as books, movies, television, or computers would make waiting tolerable and prevent them from leaving prematurely. Many EDs already have made televisions, magazines, and other reading material available, including our research site. The study results of Arendt et al were consistent with our findings that updates on wait times was a service that patients identified as motivation for waiting to see a provider.[6]

Our findings are also consistent with Ding et al, who discovered a strong association between patients who LWOBS and younger age. Almost half of the population we surveyed was 35 years old or younger. In addition, Ding et al found that people who left before seeing a provider had a history of incomplete visits in the previous year, and were covered by Medicaid or lacked insurance.[26] Twenty-five percent of our total population had an uncompleted visit in the past, but they did not specify whether the LWOBS visit had occurred at a military or civilian hospital or within the previous year. One difference is that military beneficiaries generally have healthcare coverage, so lack of insurance or fear of financial constraints is unlikely to be a factor in the high proportion of previous LWOBS visits. When accessing care through civilian hospitals, however, military personnel and dependents are subject to similar requirements of obtaining authorization for care through their insurance company.

Studies have reported that patients who leave without being seen are often less acutely ill and younger than those who stay; however, patients who do return for treatment may have a poor outcome.[8,27] The tertiary care institutions studied by Baker et al and Bindman et al had LWOBS rates of 15% and had high patient return rates (27%–45%), similar to our study.[1,2] Outcomes regarding LWOBS patients are difficult to know with certainty because most patients do not alert staff that they are leaving, and follow-up is poor. Our study did not seek to answer this question about patient outcomes; however, we were able to identify factors that may help patients stay, thus potentially reducing adverse outcomes.

Our patients, despite being in a closed healthcare system with ready access to care, identified long wait times as the primary reason they left before seeing a provider. Fully insured status does not appear to decrease ED use, but rather it suggests that this population may overuse the ED.[4] It is unclear whether ready access to care contributed to their leaving, thinking they will return at a later, possibly less busy time, or their willingness to try to make an appointment with their primary care provider.

Our study has limitations, including the generalizability of a military beneficiary population at an urban teaching hospital; however, approximately 20% of our patients are civilians, and we treat traumatically injured and medical patients, similar to civilian urban hospitals. Most of our patients are insured, which is also similar to many publicly funded hospitals, hospitals run by health maintenance organizations, Department of Veterans Affairs, Medicaid, or affluent communities. Next, the study participants had lower acuity illnesses; nevertheless, it may not affect the findings because some patients LWOBS because they were too sick to wait for care.[1] Finally, in our study we did not collect information on specific reasons why patients visited the ED on the day that they left before seeing a provider. Nonetheless, patients stated they primarily left because of long wait times that are consistent with other studies.

Conclusions

Long wait times were the primary reason patients LWOBS by a provider, despite being in a closed healthcare system with ready access to care. The majority understood that with triage, the most critical patients were seen first. Respondents attributed long wait times to patient volume and inadequate ED staffing. Participants said regular updates on wait times and time-occupying activities (eg, television shows, movies, magazines) may improve the waiting experience.

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